UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,242	08/18/2003	Casey Lee Miller	200206043-1	3279

22879 7590 11/24/2006

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER	
EGAN, SCOTT T	

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/643,242	MILLER, CASEY LEE	
	Examiner	Art Unit	
	Scott Egan	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 12-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 12-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/18/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 8/18/2003 was considered by the examiner.

Specification

2. The disclosure is objected to because of the following informalities: paragraph [19] has the "image data region" labeled "114" and the "audio data region" labeled "112", but in the fig. 1 the "image data region" is labeled "112" and the "audio data region" is labeled "114". In paragraph [29] the "personal computer" is labeled "120", but in fig. 2 the "personal computer" is labeled "202". In paragraph [34] the "memory element" is labeled "112" three times in the paragraph, but in fig. 1 the "memory element" is labeled "106". All of the above numbers should be changed in the specification to match the numbers in the drawings also listed above. In paragraph [37] applicant refers to 3-D audio clip 312, the 3-D should be changed to 2-D.

Appropriate correction is required.

Claim Objections

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims

are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 12-21 will be examined according to their given dependencies but they must be renumbered so that the claims are 1-20 rather than 1-10 and then 12-21.

4. Claim 4 is objected to because of the following informalities: claim 4 is dependent on claim 4. For the purposes of examination claim 4 will be read as dependant upon claim 3. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1-2, 6-10, 12, and 16-21** are rejected under 35 U.S.C. 102(e) as being anticipated by **Hu (US 2002/0158129)**.

Consider **claim 1**, Hu explicitly teaches "a digital camera (display apparatus), comprising:

a photosensor (image sensor 58, fig 2B) to capture an image of a bar code comprising audio information (to attain full-image view of an encoded data 54,

paragraph [0017], lines 13-16, where encoded data 54 can be a two-dimensional high-density bar code, paragraph [0111], lines 16-19);

a processor (processor 72, fig 9) to determine audio information from the captured image of the bar code (coordinates the overall task of scanning, decoding and playing back the audio data, paragraph [0112], lines 4-6); and

a speaker (loudspeaker 38) to generate audible sound corresponding to the determined audio information (for sound reproduction, paragraph [0116], lines)."

Consider **claim 2**, Hu explicitly teaches "the digital camera of claim 1, further comprising a memory wherein logic resides, the logic for determining the audio information from the captured image of the bar code when the logic is executed by the processor (a read-only memory (ROM) 77 stores the machine code routines for execution by processor 72, such as the algorithm for decoding encoded data 54, paragraph [0113], lines 14-16)."

Consider **claim 6**, Hu explicitly teaches "a method for retrieving audio information with a digital camera (display apparatus), the method comprising the steps of:

capturing an image of a bar code with the digital camera (image sensor attains a full-image view of an encoded data 54, paragraph [0107], lines 13-16 and encoded data 54 can be a two-dimensional high-density bar code, paragraph [0111], lines 16-19);

determining audio information corresponding to the captured image of the bar code with the digital camera (the processor 72 decodes encoded data 54, paragraph [0114], lines 19-20, where the encoded data is the bar code of audio information); and

generating an audible sound corresponding to the determined audio information with an audio reproduction device residing in the digital camera (the sound analog signal goes to the audio amplifier 78 for amplification and then onto the loudspeaker 38 for sound reproduction, paragraph [0116], lines 5-7)."

Consider **claim 7**, Hu explicitly teaches "the method of claim 6, further comprising the step of communicating the determined audio information to the audio reproduction device such that an audible sound corresponding to the determined audio information is generated by the audio reproduction device (the sound analog signal goes to the audio amplifier 78 for amplification and then onto the loudspeaker 38 for sound reproduction, paragraph [0116], lines 5-7, and fig 9 shows that the information from the processor 72 goes to the digital signal processor 80 and then finally through the amplifier 78 and the loudspeaker 38)."

Consider **claim 8**, Hu explicitly teaches that "the audio reproduction device is an electro-audio transducer (loudspeaker 38)."

Consider **claim 9**, Hu explicitly teaches that "the audio reproduction device is a speaker (loudspeaker 38)."

Consider **claim 10**, Hu explicitly teaches "determining audio information further comprises the step of executing logic with a processor residing in the digital camera (information in the ROM 77 is used with processor 72), the logic for determining the audio information from the captured image of the bar code when the logic is executed by the processor (a read-only memory (ROM) 77 is used to store the machine code routines for execution by processor 72, such as the algorithm for decoding encoded data 54, paragraph [0113], lines 14-16)."

Consider **claim 12**, Hu explicitly teaches "the step of retrieving the logic from a memory residing in the digital camera (a read-only memory (ROM) 77, which is inside the camera, is used to store the machine code routines and send them to the processor for execution by processor 72, such as the algorithm for decoding encoded data 54, paragraph [0113], lines 14-16)."

Consider **claim 16**, Hu explicitly teaches "the step of capturing the image of the bar code further comprises capturing the image of the bar code selected from a group consisting of a one dimensional (I-D) bar code, a two dimensional (2-D) bar code and a three dimensional (3-D) bar code (two-dimensional high-density bar code formats may also be utilized, paragraph [0111], lines 16-17)."

Consider **claim 17**, Hu explicitly teaches "a system for retrieving audio information with a digital camera (display apparatus), comprising:

means for capturing an image of a bar code with the digital camera (image sensor 58, fig 2B is used to attain full-image view of an encoded data 54,

paragraph [0017], lines 13-16, where encoded data 54 can be a two-dimensional high-density bar code, paragraph [0111], lines 16-19);

means for processing the captured image of the bar code into digital data (processor 72, fig 9, coordinates the overall task of scanning, decoding and playing back the audio data, paragraph [0112], lines 4-6 and sends information to the digital signal processor 80);

means for determining audio information from the digital data (processor 72, fig 9, coordinates the overall task of scanning, decoding and playing back the audio data, paragraph [0112], lines 4-6 and sends information to the digital signal processor 80); and

means for generating an audible sound corresponding to the determined audio information (loudspeaker 38 for sound reproduction, paragraph [0116], lines)."

Consider **claim 18**, Hu explicitly teaches "the system of claim 17, wherein the means for determining audio information further comprises means for executing logic, the means for executing residing in the digital camera, and the logic for determining the audio information from the captured image of the bar code when the logic is executed (a read-only memory (ROM) 77 stores the machine code routines for execution by processor 72, such as the algorithm for decoding encoded data 54, paragraph [0113], lines 14-16)."

Consider **claim 19**, Hu explicitly teaches "a computer-readable medium having a program for retrieving audio information with a digital camera, the program comprising logic to perform the steps of:

determining audio information from a captured image of a printed bar code (a read-only memory (ROM) 77 stores the machine code routines for execution by processor 72, such as the algorithm for decoding encoded data 54, paragraph [0113], lines 14-16);

communicating the determined audio information to a speaker such that an audible sound corresponding to the determined audio information is generated by the speaker (a read-only memory (ROM) 77 stores the machine code routines for execution by processor 72, such as the algorithm for decoding encoded data 54, paragraph [0113], lines 14-16 once the data is processed by the processor it is sent to the digital signal processor 80 and then to the audio amplifier 78 and loudspeaker 38, fig 9)."

Consider **claim 20**, Hu explicitly teaches "the computer-readable medium of claim 19, further comprising logic for:

receiving captured image data corresponding to the bar code from a photosensor (image sensor 58 sends information to the processor 72 which is run by the ROM as explained above, fig 9 and image sensor 58, fig 2B is used to attain full-image view of an encoded data 54, paragraph [0017], lines 13-16,

where encoded data 54 can be a two-dimensional high-density bar code, paragraph [0111], lines 16-19) residing in the digital camera;

generating an audio signal corresponding to the audio information (the ROM controls the processor which decodes the coded data 54 and then sends that information to the digital signal processor 80 and processor 72, fig 9, coordinates the overall task of scanning, decoding and playing back the audio data, paragraph [0112], lines 4-6); and

communicating the audio signal to the speaker (the information is then sent to the audio amplifier 78 and then the loudspeaker 38)."

Consider **claim 21**, Hu explicitly teaches "the computer-readable medium of claim 19, further comprising logic for capturing an image of the printed bar code (system only operates when processor is powered on and then the ROM controls the processor so the image sensor 58, fig 2B can be used to attain full-image view of an encoded data 54, paragraph [0017], lines 13-16, where encoded data 54 can be a two-dimensional high-density bar code, paragraph [0111], lines 16-19)."

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 3-5 and 13-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hu (US 2002/0158129)** in view of **Horii et al. (US 7,024,109)**.

Consider **claim 3**, Hu explicitly teaches the a display apparatus that reads bar codes from a picture and reproduces the coded sound using a speaker.

However, Hu does not explicitly teach the recording of a sound, which is encoded to a bar code and then printed on the image.

In the same field of endeavor, Horii et al teach an image processing apparatus, camera, with an image sensor for capturing images and relating those images to captured sounds. Horii et al. further teach the use of a microphone 102 "for inputting voice of a user or a person or the like as a subject" (column 10, lines 39-40), a CPU 120, which "executes processing relating to inputting of a sound" (column 11, lines 17-19), and the idea that the stored sound information is read out from the ASIC 103 as code data (column 11, lines 37-40), where the code data is a two-dimensional bar code (column 13, lines 31-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the recording of sound, which is encoded into a bar code and then printed on the image found in Horrii et al. into the display apparatus of Hu, in order to have the capability of capturing sound, at any time, and assigning that sound to an image via a bar code, "which stores information of multi dimensions and is easy to access" on the printed image (column 13, lines 41-43).

Consider **claim 4**, Horii et al. further teach the digital camera "further comprising a memory wherein logic resides (ASIC 103), the logic for determining the bar code corresponding to the detected audible sound when the logic is executed by the processor (the sound is stored in the CF card through the ASIC 103 which provides the coded information to the printer, column 11, lines 28-30, fig 12)." It would have been obvious to include the ASIC for the same reasons as above.

Consider **claim 5**, Horii et al. further teach "means for communicating the bar code to a means for printing (the sound stored in the CF card is similarly read out to be transferred to the printing section so as to be printed in the form of the code data, column 11, lines 37-40), such that the bar code is printed (fig 12 shows the camera portion connected to the printer section by interface 210, and fig 15 shows the printer image with the code data below it)." It would have been obvious to include the connection to the printer for the same reasons as above.

Consider **claim 13**, Hu explicitly teaches the a method where a display apparatus reads bar codes from a picture and reproduces the coded sound using a speaker.

However, Hu does not explicitly teach a method of recording a sound, which is encoded to a bar code, and then printing the image.

In the same field of endeavor, Horii et al teach a method of using an image processing apparatus, camera, with an image sensor for capturing images and relating those images to captured sounds. Horii et al. further teach the use of a microphone 102 "for inputting voice of a user or a person or the like as a subject" (column 10, lines 39-40), a CPU 120, which "executes processing relating to inputting of a sound" (column 11, lines 17-19), and the idea that the stored sound information is read out from the ASIC 103 as code data (column 11, lines 37-40), where the code data is a two-dimensional bar code (column 13, lines 31-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the recording of sound, which is encoded into a bar code and then printed on the image found in Horrii et al. into the method of using the display apparatus of Hu, in order to have the capability of capturing sound, at any time, and assigning that sound to an image via a bar code, "which stores information of multi dimensions and is easy to access" on the printed image (column 13, lines 41-43).

Consider **claim 14**, Horii et al. further teach "the steps of: communicating the new bar code to the printer (the sound stored in the CF card is similarly read

out to be transferred to the printing section so as to be printed in the form of the code data, column 11, lines 37-40); and printing the new bar code (fig 12 shows the camera portion connected to the printer section by interface 210, and fig 15 shows the printed image with the code data below it)." It would have been obvious to include the step of communicating the bar code to the printer and printing the bar code for the same reasons as above.

10. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hu (US 2002/0158129)** in view of **Horii et al. (US 7,024,109)** as applied to claims 13 and 14 above, and further in view of Kamishima et al. (US 6,415,108).

Consider claim 15, the combination of Hu and Horii et al. as explained above explicitly teaches a method of recording sound encoding it into a bar code and then printing on the same sheet as the image.

However, the combination does not explicitly teach the printing of a caption along with the bar code data.

In the same field of endeavor, Kamishima et al. teach a camera with the capability of printing a bar code, which corresponds to audio information, on an image captured by the camera. Kamishima et al. further teach the printing of a caption with information that relates the image data with the recorded sound data (column 4, lines 57-67 and column 5, lines 1-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the caption printed on the image in Kamishima et al. onto the printed image described in the combination of Hu and Hari et al. in order to easily relate the voice code image and the photographed still image (column 4, lines 57-58).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Egan whose telephone number is (571) 270-1452. The examiner can normally be reached on Monday-Friday 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 270-1455. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SE

PATRICK N. EDOUARD
SUPERVISORY PATENT EXAMINER